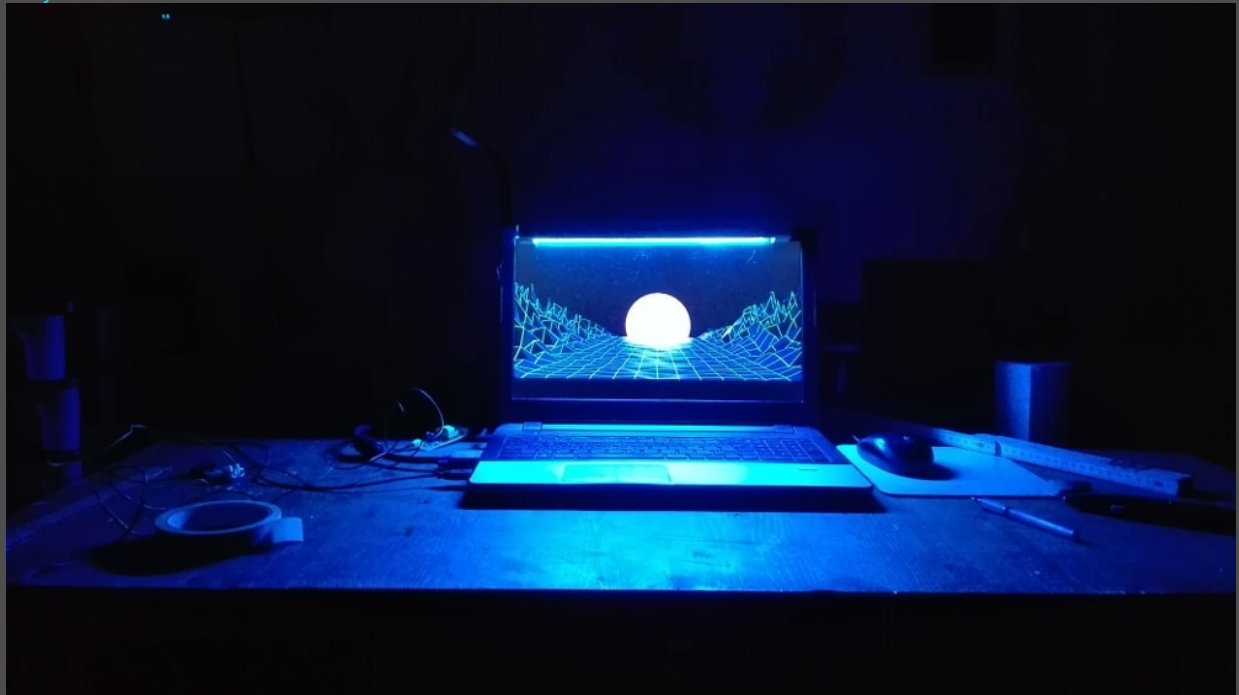


Projects



Laptop light system

Preface

Many developments arise because there is a problem or someone has a plan to improve something. For example, a generic lamp can do its job, but it doesn't look good, nor do you really want it on your desk. It glows, but nothing more. It is unfortunately not possible to stand out individually from the crowd because it is a mass product. But how is a product actually developed?

With the LLS (Laptop Lighting System) documentation I will go through these steps with you. We will analyze the problem, create drawings, build a first prototype and implement it so that we get a feeling for [industrial design](#). It is also about exploring boundaries and sorting out bad ideas. So we will also discard again and put sketches in a drawer, because they are no good after all. And we will always have to find solutions for partial problems, because otherwise we will not make any progress.

The LLS documentation is also there to show the process in its entirety as an example, so that it does not have to be described again and again in the other documentation. Once we have learned the main tasks, the variants are self-explanatory and clearly understandable. It is about being able to transport collected knowledge simply and without effort, because the less stress we have in the learning process, the more we can concentrate on the development process. The strenuous work must flow automatically out of the hands.



fig. [Source](#)

How an industry design prototype can look like, we can see from the example of TheRealBreadman, who posted a smartphone data glasses at Reddit. This is simply made of cardboard, fixed with adhesive tape and equipped with three lenses. Nevertheless, we can already determine very precisely in which direction the developments should go. Cardboard is a really good material to realize projects quickly, i.e. we will use the material also in the first steps. A good source for industrial design techniques is Eric Strebel.

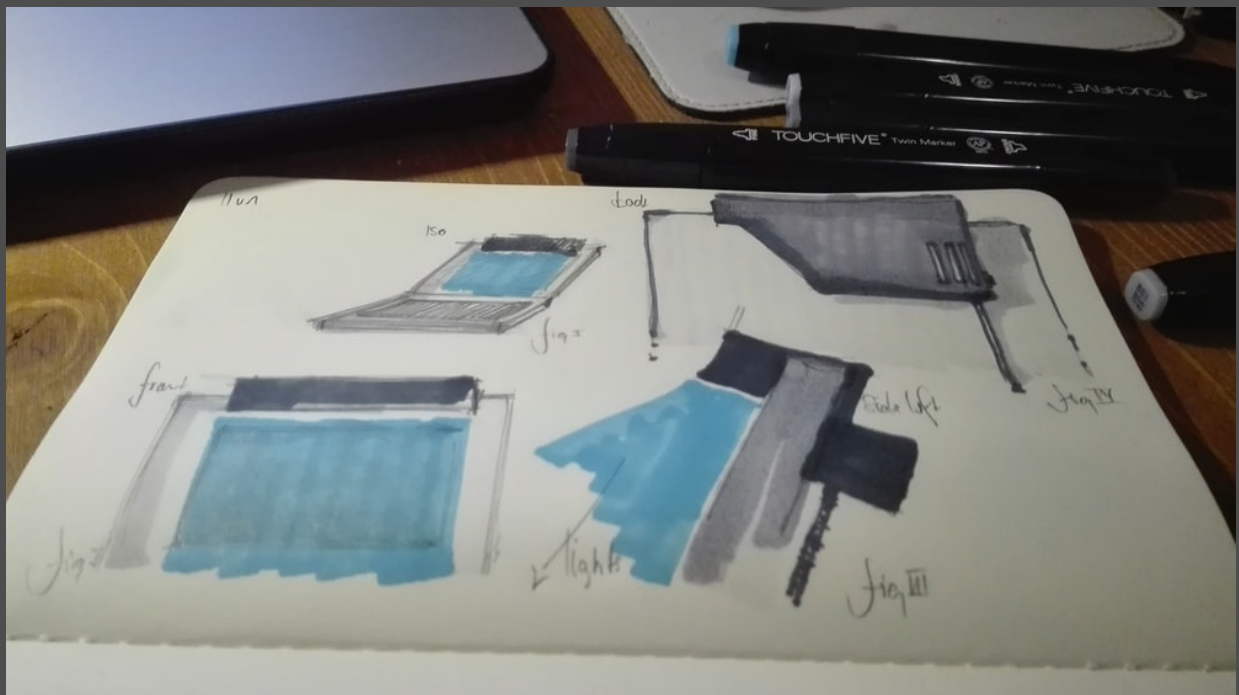
Materials

Only materials from old projects or household materials are used in this documentation. The aim is to promote improvisation. It should also be shown that the concept of a quick idea can look as good as a well thought-out work. Sometimes you just have to put a thought into practice that you have in mind to check a thought. We need a long neon tube, tape, cardboard, drawing pads and various pencils (you don't have to use professional design pens for the beginning), a luster terminal with an on and off switch. Finally, we need a digital caliper gauge.

Realisation



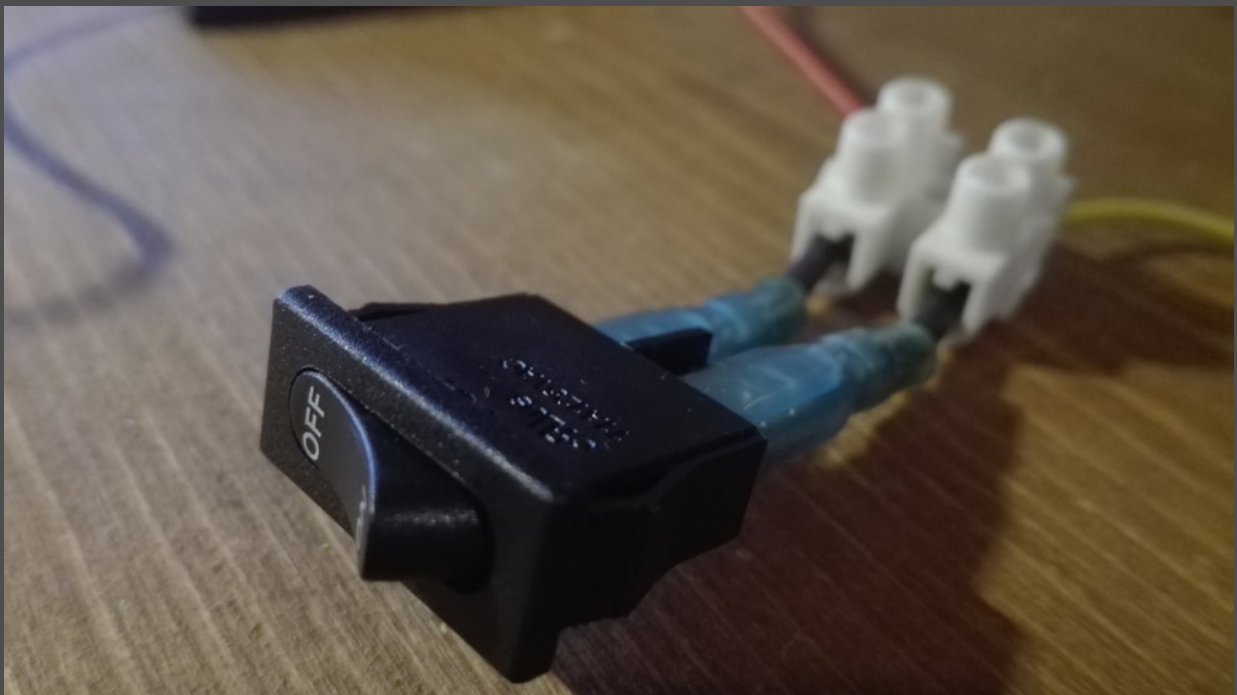
Our current status before the start of the project. On the left side is the lamp of a Swedish furniture manufacturer. This fulfills its function (illumination of the table). But it doesn't look good, has the wrong color (white light is too aggressive for me), seems too strong (you can recognize it by the glare effect on the photo) and can't be positioned properly. Some partial problems that have to be changed or optimized.



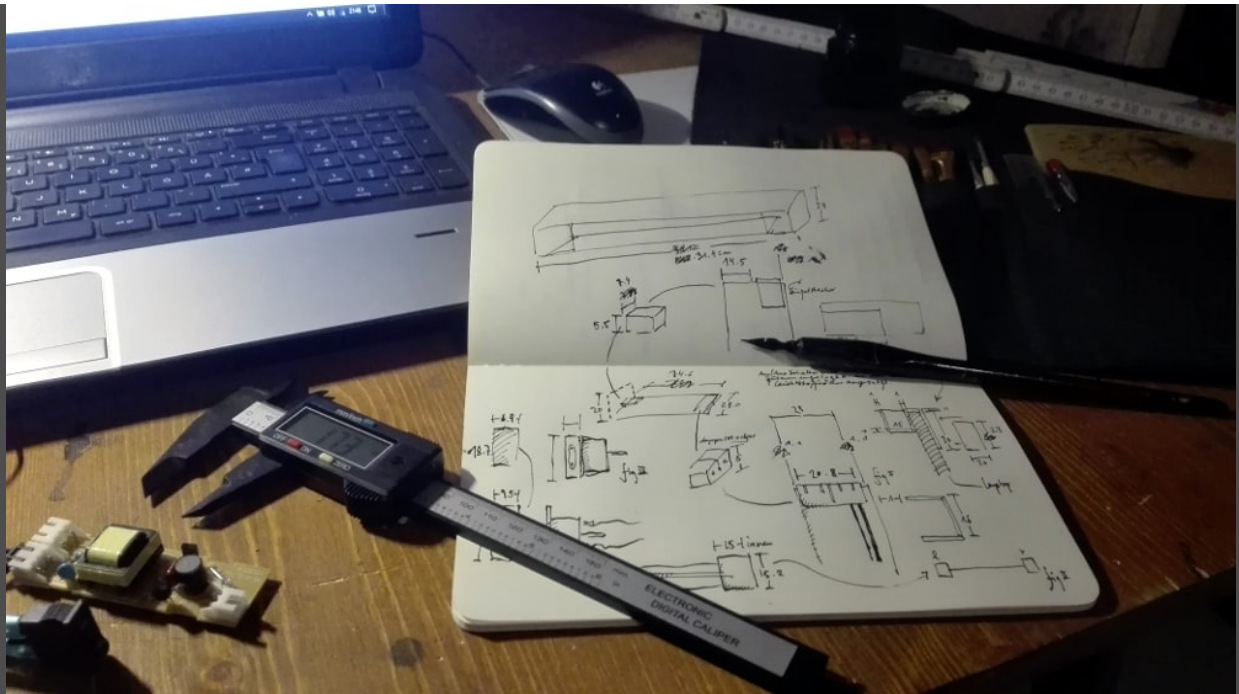
Before you start a project, you should visualize the ideas in your head. You don't even have to be artistically talented, but just have to deal a little more with the idea. When you draw something, it is possible to look at questions from a different angle, and it is also the first step in developing a concrete concept from a vague idea.



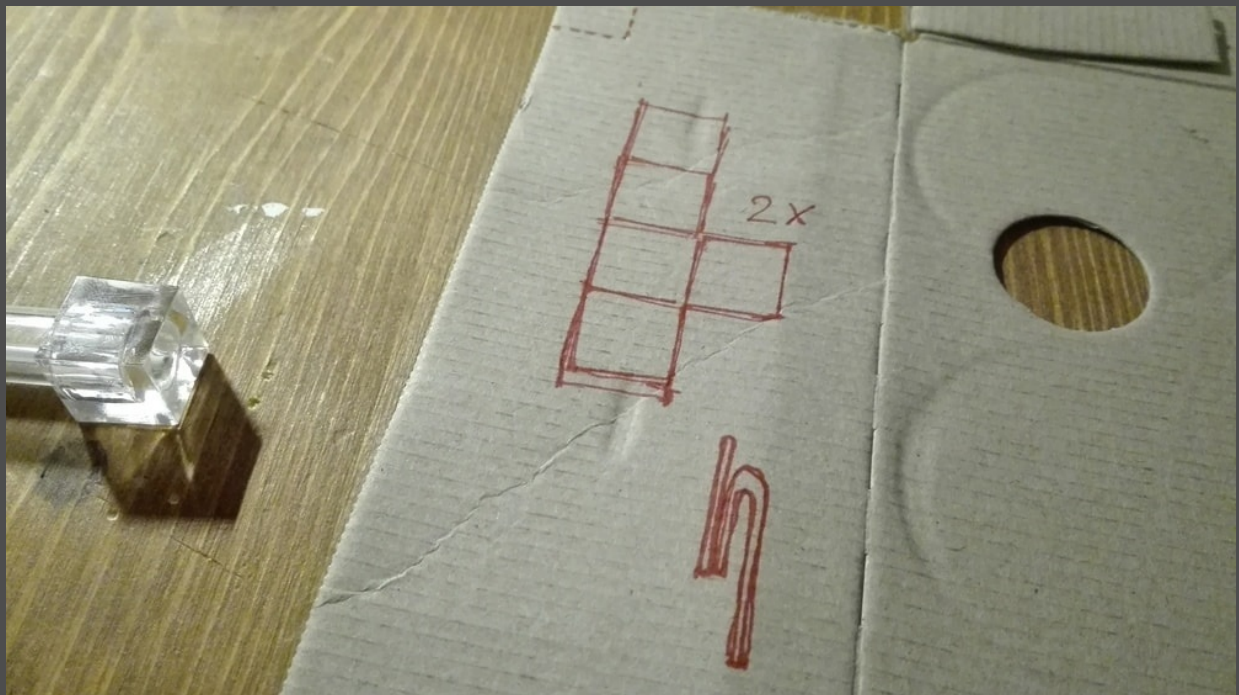
In the cellar I still had a neon tube, which I had once gotten as a present. The plastic housing has already been used for another project. Since this is cheap Hardware, we still have to make some technical changes beforehand. It will almost always be the case that we have to change things in their form or structure. Therefore, industrial designers are familiar with many materials. Sometimes you have to make something out of wood or paper, another time with clay or aluminum.



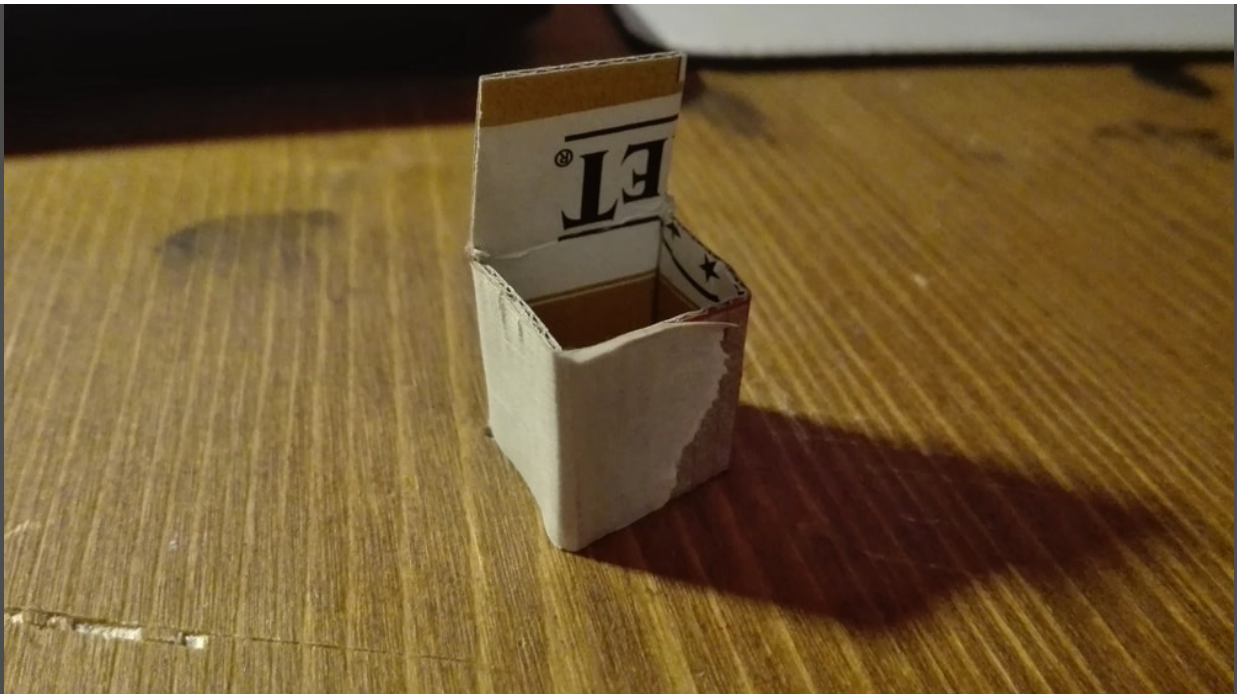
An on/off switch with a luster terminal has been connected. Since it is cumbersome to operate the laptop lighting system with a power supply unit every time you use it. Since we only implement one idea quickly, that is sufficient. We should not waste time in fancy details and concentrate on the core elements. The main task can be defined in this way. Lamp should be able to be attached to a laptop lid. Done. Details develop over time when a certain routine has been developed during implementation.



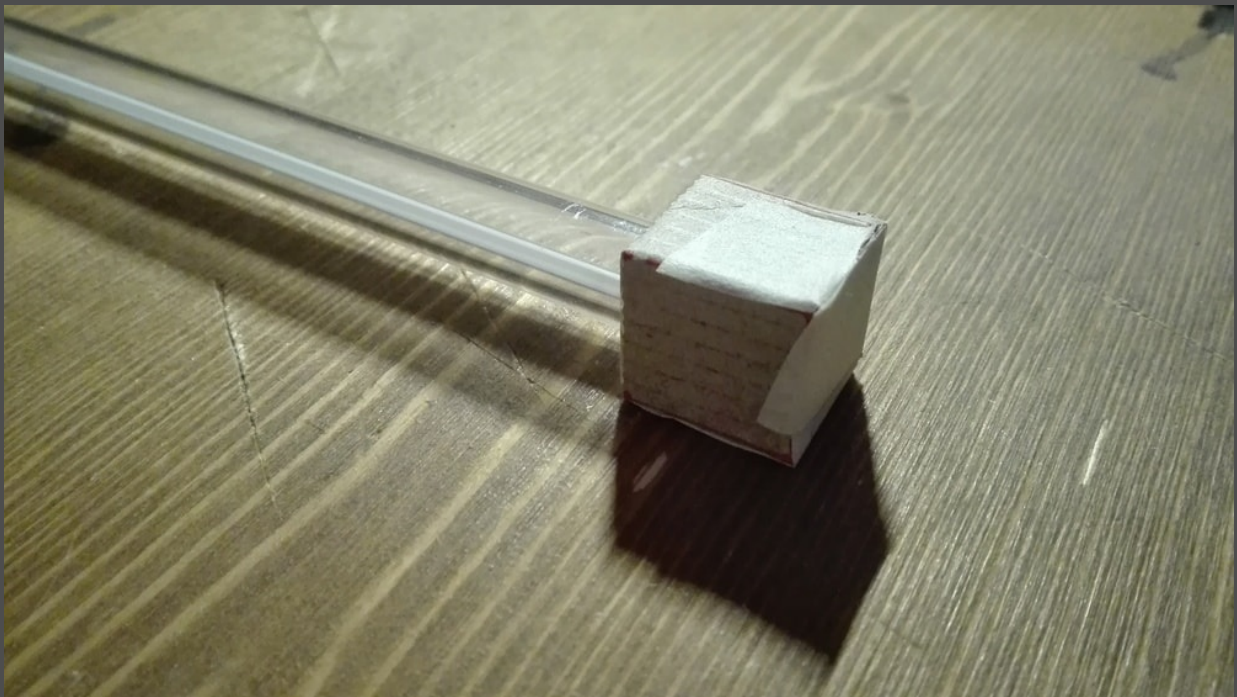
In order to develop a prototype, we must first measure our existing hardware with a digital slide. This enables us to create concrete guidelines to which we must adhere (e.g. length, width, depth). This is our first correct [technical drawing](#). It is built according to certain rules and we can also give it to other designers or craftsmen. Once we have put everything together properly, your employees will have no problems reading it.



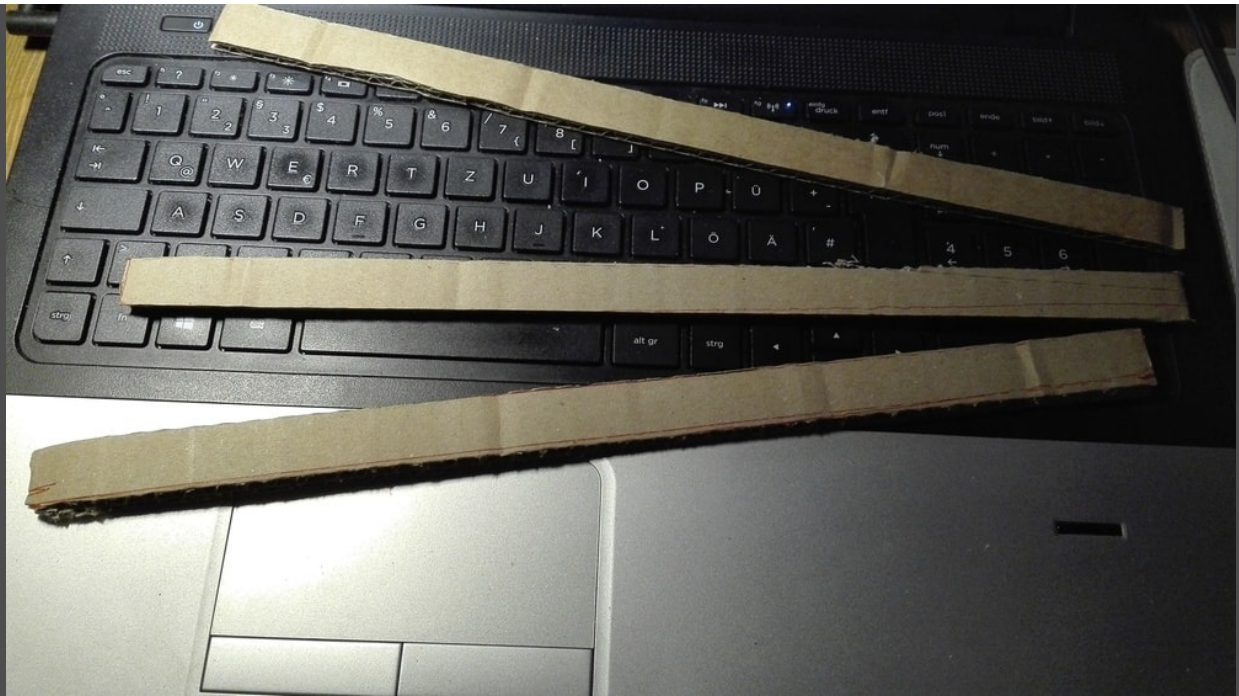
Drawing of a cube net on a base. Sometimes it is better to record simple geometric objects as a network of bodies.



This is one of the two cubes I made for the ends of the neon tube. As you can see, this is neither nice nor difficult to realize and everyone with tape, cardboard and scissors can create a prototype.



When we have measured the two boxes of cardboard fit exactly. It is important to work accurately and to follow the measurement instructions. This shows people who consider your work that you want to work and be treated as a professional. Of course, you can work a little more freely at home, but my personal standard is high and I have therefore given up this in my spare time. But you also learn that by yourself over time.



In the next step we will create the actual packaging for the laptop lighting system. We measure the height and width of the LED tube and transfer this data to a piece of cardboard by drawing long rectangles. We cut them out with scissors or a cutter. The individual cardboard strips are glued together with painter's tape and attached to the rest of the construction. Two adjacent sides of the tube remain free so that our lamp only shines in this particular area.





As we can see, our construction works. We attach them by gluing three adhesive strips and then attaching them to the laptop. In the following pictures you can see the project in its full effect. It was shown how to create a prototype out of cardboard to realize an idea. Various techniques and tools were used to achieve this goal.





Conclusion

Of course you can't start your own business as an industrial design freelancer right now, but it helps to get a rough picture of this profession. Each country has different requirements as an industrial designer. Sometimes you have to complete several years of training or study. Sometimes it's enough to have done a few good jobs. This is very different. All in all, this is a very multifaceted profession and anyone who has watched videos on the subject can certainly get a clearer picture.